

Memorandum

*Flex your power!
Be energy efficient!*

To: GARY S. ARNOLD
LOCAL DEVELOPMENT/IGR
HEADQUARTERS

Date: March 17, 2009

File: BAG001

From: 
LISA CARBONI
LD/IGR – District 4

Subject: California High Speed Train Project from San Francisco to San Jose, CA – revised Notice of Preparation (NOP)

District 4 provides the following comments on the revised NOP:

Traffic & Highway Operations

- Safety is improved by the implementation of track grade separation at all cross traffic intersections.
- Figures 1A and 1B show that the San Francisco-San Jose High Speed Train (HST) would run parallel to parts of State Route (SR) 82, US-101 and Interstate (I-) 280, and cross SRs 85 and 92, US-101, SR 237, I-380, and I-880. These figures also show that the proposed HST stations are to be located near these State highways. Since the HST stations will induce additional demand on the state highway system, particularly on the mainline segments, intersections, and ramps in the vicinity of the HST stations, the Environmental Impact Report / Environmental Impact Statement (EIR/EIS) needs to evaluate the traffic impacts that this demand will cause.
- The EIR/EIS needs to evaluate the traffic impacts to the State highway system caused by construction work to build the HST tracks and the stations.
- Increased traffic congestion on local roads and state highways near high speed rail stations should be evaluated.
- Projections for rail riderships, increased traffic near rail stations, and decreased traffic on parallel highways should all be consistent with each other and be the product of the same travel demand model. This model should be subject to local area validation to ensure that it is producing realistic results for the facilities evaluated.

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- The effects and utility of the San Francisco to San Jose section of high speed rail should be examined without the construction of the rest of the proposed system.

We recommend using the Department's "Guide for the Preparation of Traffic Impact Studies" for determining which scenarios and methodologies to use in the analysis. It is available at the following website address:

<http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf>

We propose meeting with the lead agency before studies are initiated to discuss potential study scope and traffic analyses requirements.

Transportation Planning

The project sponsor may wish to examine the market potential for high speed rail feeder service to interstate and international air travel, utilizing San Francisco International Airport and Mineta San Jose International Airport. Issues that are associated with this type of service would include the following:

- Whether or not to provide a high-speed station stop in Santa Clara, where a planned airport people-mover will connect Mineta San Jose International Airport to the Caltrain and (future) BART stations.
- How to provide a connection to San Francisco International Airport that is easy and convenient for customers.
- How should luggage be accommodated? Should off-site terminals with luggage check-in and transfer be implemented?

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passenger
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Cultural Resources

If construction activities are proposed within the State's right of way (ROW), the Department requires documented results of a current archaeological record search from the Northwest Information Center (NIC) of the California Historical Resources Information System before an encroachment permit can be issued. Current record searches must be no more than five years old.

The Department requires the records search, and if warranted, a cultural resource study by a qualified, professional archaeologist, to ensure compliance with NEPA (if there is federal action on the project), CEQA, Section 5024.5 of the California Public Resources Code (for state-owned historic resources) and Volume 2 of the Department's "Standard Environmental Reference", available at <http://www.dot.ca.gov/hq/env/index.htm>). Work subject to these requirements includes, but is not limited to: lane widening, channelization, auxiliary lanes, and/or modification of existing features such as slopes, drainage features, curbs, sidewalks and driveways within or adjacent to State ROW.

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coordination

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AIR TRAVEL/
AIRPORT
ACCESS

#2

STATION
LOCATION

#1

CULTURAL

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Encroachment Permit

Any work or traffic control within the State ROW requires an encroachment permit that is issued by the Department. Traffic-related mitigation measures will be incorporated into the construction plans during the encroachment permit process. See the following website link for more information:
<http://www.dot.ca.gov/hq/traffops/developserv/permits/>

To apply for an encroachment permit in District 4, submit a completed encroachment permit application, environmental documentation, and five (5) sets of plans which clearly indicate State ROW to the address at the top of this letterhead, marked
ATTN: Michael Condie, Mail Stop #5E.

#1
TRAFFIC

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

MAR 12 2009



March 10, 2009

Mr. Dan Leavitt
Deputy Director
California High-Speed Rail Authority
925 L Street, Suite 1425
Sacramento, CA 95814

Re: Notice of Preparation, Project Environmental Impact Report/ Environmental Impact Statement. California High Speed Train (HST) Project from San Francisco to San Jose, CA.

Dear Mr. Leavitt:

According to the NOP, several documents have been prepared by the Authority to initiate this project back in 2005 and 2008 to select the preferred alignment for the Bay area to Central Valley section of the HST system. Although the Public Utilities Commission (CPUC or Commission) has been interacting with the High Speed Rail Authority and other state agencies regarding the project, the CPUC has not specifically provided written comments on this project prior to this date and we appreciate the opportunity to provide the following comments:

Some background general statistics for this proposed corridor:

Railroad crossings:

Other than stations, there are 120 total crossings, 46 at-grade grade crossings, and 2 at-grade pedestrian crossings, according to CPUC records. There are also a number of at-grade pedestrian crossings at stations throughout the corridor.

Train Operations:

Caltrain operates 98 trains per day at 79 mph maximum speed and Union Pacific Railroad operates approximately 4 freight trains per day.

There are numerous at-grade pedestrian crossings at the Caltrain stations along the corridor. Even with pedestrian treatments such as automatic gates and channelization, pedestrian/train accidents regularly occur with the existing train operations. Increasing the number and speed of trains will exacerbate the situation. These crossings must be consolidated and grade separated as part of the project.

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grade
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#1
Safety

The NOP states that all crossings along the proposed corridor will be grade-separated. The feasibility and impacts of grade-separation or elimination of these crossings will require a great amount of analysis. Construction of roadway grade separation structures is likely to involve

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grade
separation

massive changes to public infrastructure and private property in the vicinity of railroad crossings due to constrained geometry and the large footprint required by typical railroad grade separation structures. The local entities need to amend their general plans to reflect this project and the need for future right-of-way preservation for the footprint of new grade separations in required areas.

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Specific Project Concerns

1. Due to the proximity to the San Francisco Bay, issues with a high water table will need to be addressed. This issue has often been cited to CPUC staff as a primary factor making grade separation of railroad crossings infeasible in this area, but due to other constraints this project may need to construct below the water table at some locations.
2. The majority of cities along the proposed corridor have built their downtowns around the tracks. The high density commercial, residential and industrial areas near the tracks lead to a high amount of pedestrians around the tracks. Leaving the tracks at the current elevation is likely to result in trespassing issues similar to those currently experienced along the Caltrain corridor. Elevating or lowering the tracks, particularly in the downtown areas, would mitigate this concern. Fencing any remaining at-grade portions of the alignment should be a requirement of the project.
3. Electrified train operations are generally incompatible with current technology for Constant Warning Time Detection systems implemented at at-grade crossings. If there were a proposal to operate electrified trains at any speed through an at-grade crossing, the warning devices and train detection equipment would require careful design to ensure safe operation.
4. The analysis should consider whether electrified lines would be able to meet minimum required clearances from tunnel walls and other utility lines. Most crossings along the Caltrain corridor most crossings have overhead power lines passing over the crossings. These lines all need to be relocated (trenched underground) if the tracks remain at their current elevation.
5. Caltrain station designs may need to be significantly modified in order to construct the necessary roadway and pedestrian grade-separated crossings.
6. The proposed HST service operating on the same tracks as Caltrain service raises safety concerns due to the high number of Caltrain trains and the speed differences between the trains. It may be necessary to entirely separate the HST tracks at Caltrain local stops in order to provide separation between the station platform and 150 MPH trains.

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safety (op)

7. The HST corridor is adjacent to a light rail corridor in the City of Mountain View, where the Santa Clara Valley Transportation Authority (VTA) has light rail tracks adjacent to the Caltrain tracks for several miles. The two also share a station (separate tracks at the same station), which is a transfer point. The High Speed Rail Authority must work with VTA and Caltrain in the design of the station and final track layout.
8. It appears that many railroad crossings would have freight and high-speed passenger track side by side. At such locations, it can be more expensive and problematic to grade separate all tracks, but the overall benefits are much greater. Building a new grade separation structure adjacent to an at-grade railroad crossing can negatively impact the safety of the existing crossing due to limiting the configuration of warning devices, limiting the geometry of the roadway and sidewalk (potentially precluding medians or ADA compliant improvements), and obstructing visibility of the warning devices or an approaching train. Rather than degrading the safety of the existing at-grade crossings, the project should provide overall improvement by constructing a grade separation of all the tracks at each crossing.
9. The project is subject to a number of rules and regulations involving the CPUC. These may include: Section 1201 et al of State of California Public Utilities Code, which requires Commission authority to construct rail lines over existing streets. The design criteria of the proposed project must comply with CPUC General Orders (GOs), such as, GO 26-D regulations governing clearances on railroads and street railroads with reference to side and overhead structures, parallel tracks, crossing of public roads, highways and streets. GO 72-B rules governing the construction and maintenance of crossings at grade of railroads with public streets, roads and highways; and GO 75-D regulations governing standards for warning devices for at-grade highway-rail crossings. For questions regarding this specific oversight, please contact Mr. Felix Ko at (415) 703-3722 or Kevin Schumacher at (415) 703-1208.

We have provided as an attachment a listing of crossings along the proposed route with identified concerns relative to the comments above, with brief notes pertaining to the identified concern.

We understand that this is a highly complex and challenging project with funding, design and environmental approval for California. It is imperative that the CPUC be involved with the details of this project from its inception in order to be informed and to be of greater assistance in the future. While the Authority has worked with the FRA since the inception of the project, the CPUC will need to be a part of that inter working collaborative from this point forward in order to provide applicable regulatory oversight for all phases of the project. This will require early consultation with not only Authority staff but contracted consultants as well in order to provide early consultation on all proposed design and engineering of the proposed project improvements on the corridor.

#2
station
design
#3 transfer

#2
grade
separation
#1 safety

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coordination

#3
coordination

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This will assist with the review of the environmental documents and final CEQA approval of the project by the CPUC, since we are a responsible agency under CEQA section 15381 with regard to this project and in complying with any and all General Order requirements as they apply to the HST project.

#1
Responsible
Agency

It is our intent to make CPUC staff readily available, as necessary, to provide evaluations, comments and recommendations relevant to our jurisdiction, to you and your consultants on as needed basis throughout the duration and for all segments of the project.

We look forward to working with the Authority on this project. Should you have any questions, please contact me at (415) 713-0092 or email at moses@cpuc.ca.gov.

Sincerely,



Moses Stites
Rail Corridor Safety Specialist
Public Utilities Commission
Consumer Protection and Safety Division
Rail Transit and Crossing Branch
515 L Street, Suite 1119
Sacramento, CA 95814

Attachment: List of Specific Railroad Crossing Concerns

City	CPUC #	DOT #	Street	Concerns
San Francisco	105E-0.80	922712X	Mission Bay Blvd. & 7th St	These crossings are under HWY 280, eliminating the option to raise the tracks or roadway. Lowering the track or road elevation must account for the high water table caused by the proximity to the San Francisco Bay. The electrified HSR corridor will conflict with proposed electrified SF MUNI service.
	105E-1.08	754749Y	16th St & 7th St	Mission Bay Blvd. which is not currently open to traffic should be considered for elimination.
	105E-10.20	754866U	South Linden Ave	There is heavy truck traffic at this location. Any road under the railroad tracks must have clearances and turn radius' account for large trucks. This crossing is #32 on the Section 190 priority list.
San Bruno	105E-11.00	754869P	San Bruno Ave	These two streets form a triangle with Huntington Ave with the Caltrain tracks bisecting this triangle, forming 2 crossings. The SR 380 overpass is located 1/4 mile north of the San Bruno Ave crossing, which will impact the design of grade separations at these crossings. Crossings are #8 on the Section 190 priority list and in the first phase for CTC's Prop 1B funding scheduled for construction to begin in december 2010 (although no application has been filed with the CPUC yet).
	105E-11.10	754870J	San Mateo Ave	
	105E-15.90	754886F	Oak Grove Ave	There is a high school east of these crossings with residential and commercial areas west of the tracks. There is very high pedestrian traffic at these locations due to the students traveling to/from the school. Elevating or lowering the track elevation is mandatory here to eliminate trespassing issues. Leaving the tracks at the current elevation is not an option.
San Mateo	105E-16.20	754887M	North Ln	
	105E-17.70	754900Y	1st Ave	
	105E-17.80	754901F	2nd Ave	
	105E-17.90	754902M	3rd Ave	
	105E-18.00	754903U	4th Ave	
	105E-18.10	754904B	5th Ave	
Redwood City	105E-18.30	754905H	9th Ave	
	105E-24.80	754935A	Whipple Ave	Caltrain ROW travels through downtown with high pedestrian traffic. Leaving the tracks at their present elevation will lead to trespassing issues, regardless of fencing the right of way.
	105E-25.20	754936G	Brewster Ave	
	105E-25.40	754937N	Broadway St	Redwood City is a mix of residential, commercial, and industrial zones with high pedestrian traffic surrounding the tracks. Leaving the tracks at their

	105E-25.70	754940W	Maple St	present elevation will lead to trespassing issues. The SR 84 overpass is located 1/6 mile south of the Chestnut St crossing, which will limit the grade separation options.
	105E-25.80	754941D	Main St	
	105E-26.00	754942K	Chestnut St	
Palo Alto	105E-29.80	754992N	Alma/Palo Alto St	Train bridge over a creek located 300 ft north of the crossing, which will impact the grade separation options.
	105E-31.00	754998E	Churchill Ave	High school in NW quadrant of crossing. There is high pedestrian and vehicular traffic due to the school. Leaving the tracks at their present elevation will lead to trespassing issues.
Mountain View	105E-35.90	755015B	Castro St	Crossing is between two overpasses. Raising the track elevation is not feasible due to proximity of the overpasses.